



FLUORESCENT PENETRANT TESTING

MET-L-CHEK PENETRANT SYSTEMS

Emulsifiers:

Product Name	Method	AMS-2644 QPL4	Product Information
MET-L-CHEK E-57	«B»	Yes	A lipophilic emulsifier, which is a viscous, oily, orange liquid used with all MET-L-CHEK post emulsifiable penetrants. After an appropriate penetrating dwell time the parts are dipped into the emulsifier, removed and drained for 1-3 min, after which the parts are water washed. E-57 is low in sulfur and halogens and is supplied ready to use.
<u>Delivery form:</u>			
			Can 1 L Art.No. 122.112.302
			Can 10 L Art.No. 122.112.303
			Cask 200 L Art.No. 122.112.304
MET-L-CHEK E-58 D	«D»	Yes	A hydrophilic emulsifier, that is supplied as a concentrate. In use it is diluted with water to approx. 20 % strength for dip applications and less than 5% for spray applications. It provides excellent process control for maximum sensitivity with all MET-L-CHEK post emulsifiable penetrants. Approved by Pratt and Whitney, GE, AEG, Detroit Diesel Allison. PMC # 4355-7.
<u>Delivery form:</u>			
			Can 1 L Art.No. 122.112.202
			Can 10 L Art.No. 122.112.203
			Cask 200 L Art.No. 122.112.204

The use of **developers** is an important part of the penetrant inspection process. The developer draws the penetrant from the discontinuity to form a more uniform background enhancing the detectability of the penetrant indication. All MET-L-CHEK developers are listed on the Qualified Products List for AMS-2644. They meet the

requirements of ASME Boiler and Pressure Vessel Code and ASTM E-1417 as well as EN ISO 3452-2 for penetrant inspection materials. They are low in Sulfur, Chlorine and other Halogens, making them safe for use on titanium and high nickel alloys in nuclear applications.

Developers:

Product Name	Form	AMS-2644 QPL4	Product Information
MET-L-CHEK D-70	d & e – non-aqueous developer	Yes	A suspension of developer in alcohol carrier fluid. It offers the highest sensitivity and is used for critical inspections where the finest defects must be detected. D-70 dries quickly and produces a smooth, uniformly white coating. To be used with visible and fluorescent penetrants.
<u>Delivery form:</u>			
			Spray can 400 ml Art.No. 121.100.501
			Can 1 L Art.No. 121.100.502
			Can 10 L Art.No. 121.100.503
			Cask 200 L Art.No. 121.100.504
MET-L-CHEK D-78B	c – water suspendible developer	Yes	D-78B is a chromate-free dry powder, which is mixed with water to form a suspension. It must be agitated to maintain uniformity. Parts are dipped into the developer, drained and dried prior to inspection. Use with visible and fluorescent penetrants.
<u>Delivery form:</u>			
			Container 20 kg Art.No. 122.120.406
MET-L-CHEK D-72A	a – dry developer	Yes	A light, fluffy, dry powder developer, which is used principally for fluorescent penetrant inspection. It is dusted onto the part surface by hand or in specialized developer application equipment. Approved by Pratt and Whitney, GE, AEG and other engine and airframe manufacturers.
<u>Delivery form:</u>			
			Container 1 kg Art.No. 122.120.306
MET-L-CHEK D-76B	b – water soluble developer	Yes	An aqueous soluble developer for use with post emulsifiable fluorescent penetrants. It forms thin, uniform translucent coatings, which are easily washed off after the inspection. It is supplied as a dry powder which is dissolved in water. Once dissolved, no agitation of the bath is required.
<u>Delivery form:</u>			
			Container 10 kg Art.No. 121.100.606